

AMENDMENTS

In the claims:

Please amend the following claims as follows wherein underlining indicates insertions and bracketing "[]" indicates deletions.

Also, please add and examine new dependant claims 24-28.

Thank you.

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1. (once amended) An improved desktop operated computer control device of the type having a rotatable ball for pointing control, said control device further of the type including a housing, electronic circuitry within said housing and coupled to communication means for communicating control signals from said electronic circuitry to a computer, a plurality of finger depressible buttons exposed on said housing and interfacing with sensors electrically connected with said electronic circuitry for allowing user selection of control signals communicated to a computer; at least two of said sensors each capable of providing at least three readable states of varied conductance, at least two states of said at least three readable states dependant upon depressive pressure applied to the variable-conductance sensors through depression of an associated button;

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wherein the improvement comprises:

said electronic circuitry including means for reading said at least three readable states and for producing a distinct control signal for each state of said at least two states, the distinct control signals are

screen scrolling control signals used to determine scrolling speed rates.

2. (once amended) An improved desktop operated computer control device according to claim 1 wherein said at least two of said sensors are analog sensors each including pressure-sensitive variable-conductance material.

[the distinct control signals are screen scrolling control signals, and are used to determine scrolling speed rates.]

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3. (once amended) An improved desktop operated computer control device of the type having a rotatable ball for pointing control, said control device further of the type including a housing, electronic circuitry within said housing and coupled to communication means for communicating control signals from said electronic circuitry to a computer, a plurality of finger depressible buttons exposed on said housing and interfacing with sensors electrically connected with said electronic circuitry for allowing user selection of control signals communicated to a computer;

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wherein the improvements comprise:

at least two of said sensors are analog sensors each including pressure-sensitive variable-conductance material to provide at least three readable states of varied conductance, said states dependant upon depressive pressure applied to the pressure-sensitive variable-conductance material;

said electronic circuitry including means for reading said at least three readable states and for producing a distinct control signal for each of at least two states of said at least three readable states.

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5. (once amended) An improved desktop operated computer control device of the type having a rotatable ball for pointing control on a computer monitor, said control device further of the type including a housing, electrical power source means for powering electronic circuitry, said electronic circuitry located within said housing, said electronic circuitry coupled to communication means for communicating control signals from said electronic circuitry to a computer, a plurality of finger depressible buttons exposed on said housing and interfacing with sensors electrically connected with said electronic circuitry for allowing user selection of control signals communicated to a computer;

wherein the improvements comprise:

at least two of said sensors are analog sensors including

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pressure-sensitive variable-conductance material, each said analog sensor structured to provide at least three readable states of varied conductance, said states dependant upon depressive pressure applied individually to the sensors of said at least two sensors;

said electronic circuitry including means for reading said at least three readable states and for producing scroll control signals representative of each of at least two states of said at least three readable states;

a first sensor of said at least two sensors, said first sensor associated with a first button of said finger depressible buttons, said first button variably depressible to allow applying varied depressive pressure to said first sensor, said first sensor connected to said electronic circuitry, said electronic circuitry for reading said at least three readable states and producing at least two different scroll-up values as said scroll control signals;

a second sensor of said at least two sensors, said second sensor associated with a second button of said finger depressible buttons, said second button variably depressible to allow applying varied depressive pressure to said second sensor, said second sensor connected to said electronic circuitry, said electronic circuitry for reading said at least three readable states and producing at least two different scroll-down values as said scroll control signals.

6. (once amended) An improved desktop operated computer control device in accordance with claim 5 wherein the first and second sensors [are each] include elastomeric dome-caps [dome-cap sensors each] including [a] the pressure-sensitive variable-conductance material carried by and within said dome-caps. [positioned over proximal conductive circuit elements of said electronic circuitry.]

7. (once amended) An improved desktop operated computer control device in accordance with claim 5 wherein the first and second sensors are each packaged sensors each comprising:

a package housing;

an electrically conductive concavo-convex resilient disk within the package housing;

two normally electrically separated proximal circuit elements at least in-part within the package housing;

a depressible button retained to the package housing and positioned such that depression of the button depresses said disk;

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said pressure-sensitive variable-conductance material positioned within the package housing to receive compressive pressure thereagainst from and upon depression of said disk, said pressure-sensitive variable-conductance material further positioned to define at least a portion of an electrically conductive path defined between said proximal circuit elements upon depression of said disk, whereby said electrically conductive path is of varied electrical conductivity [conductively] dependant upon an amount of compression applied to said pressure-sensitive variable-conductance material.

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~~12. (once amended) An improved method of controlling window scrolling of a computer using a desktop operated computer control device of the type having a rotatable ball for pointing control, the control device further of the type including a housing, electrical power source means for powering electronic circuitry, said electronic circuitry located within said housing, said electronic circuitry coupled to communication means for communicating control signals from said electronic circuitry to a computer, a plurality of finger depressible buttons exposed on said housing and interfacing with sensors electrically connected with said electronic circuitry for allowing user selection of control signals communicated to a computer; said control device further of the type wherein a user depresses [a] an analog scroll~~

control button of said buttons to activate a scroll control signal related to the depressed button, and releases the depressed button to deactivate said scroll control signal;

wherein the improvement comprises:

depressing, by the user, said analog scroll control button with any user selectable pressure level of a plurality of user selectable pressure levels, the user selectable pressure levels associated with various distinct values of said scroll control signal, whereby the user controls screen scrolling rate by way of selecting the pressure applied to said analog scroll control button.

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13. (once amended) An improved method of controlling window scrolling of a computer using a desktop operated computer control device according to claim 12 wherein the method further comprises

increasing pressure applied to said analog scroll control button for increasing scrolling rate.

14. (once amended) An improved method of controlling window scrolling of a computer using a desktop operated computer control device according to claim 12 wherein the method further comprises

decreasing pressure applied to said analog scroll control button for decreasing scrolling rate.

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15. (once amended) A method of manufacturing an improved desktop operated computer control device of the type having a rotatable ball for pointing control including the known prior art steps of: molding a housing; installing means for receiving a power source; installing electronic circuitry within said housing and connected to said means for receiving said power source; connecting communication means to said electronic circuitry for communicating from said control device to a computer; installing a rotatable ball; connecting to said electronic circuitry means for sensing rotation of said ball for pointing control;

installing a plurality of finger depressible buttons positioned for bearing on sensors electrically connected with said electronic circuitry; said electronic circuitry for reading a plurality of said sensors as sensors having only two readable values; and

further including the novel combined steps of:

installing pressure-sensitive variable-conductance analog sensors positioned to be activated by depression of at least some buttons of said finger depressible buttons, said pressure-sensitive variable-conductance analog sensors structured to provide at least three readable values, said values dependant upon depressive pressure applied to said pressure-sensitive variable-conductance analog sensors;

installing circuitry for reading an immediate value of said at least three readable values of the pressure-sensitive variable-conductance analog sensors, and for communicating data representative of the immediate value from said control device to a computer,

whereby said improved device is manufactured for communicating data representative of the depressive pressure applied to said pressure-sensitive variable-conductance analog sensors.

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16. (once amended) A computer mouse for use with a computer, the computer running network browser software for visiting network addresses, said mouse having:

a housing; and

at least one user depressible surface exposed on said housing for communicating a first command signal to the computer, said first command signal being dedicated to moving the network browser software backward to a [previous] previously visited network address.

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17. (once amended) A computer mouse according to claim 16 further including a second user depressible surface for

communicating a second command signal to the computer, said second command signal being dedicated to moving the network browser software to a forward address.

18. (once amended) An improved computer mouse of the type including a housing, electrical power source means for powering electronic circuitry, said electronic circuitry located within said housing, pointer control means coupled to said electronic circuitry for allowing user control of a pointer on a computer monitor, said electronic circuitry coupled to communication means for communicating output control signals from said electronic circuitry to a computer, a plurality of finger depressible buttons exposed on said housing and interfacing with sensors electrically connected with said electronic circuitry for allowing user selection of output control signals communicated to a computer;

wherein the improvement comprises:

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at least one of said buttons being a back button, [whereby] depression of said back button causes [communication] reception of a back control signal [to] by network browsing software initiating said software to display a previously viewed network address, said network browsing software recognizing said back control signal without a requirement of the pointer being located on the software back button displayed on the monitor.

19. (once amended) An improved computer mouse according to claim 18 further including at least one of said buttons being a forward button, depression of said forward button causes reception of a forward control signal by network browsing software initiating said software to display a previously viewed network address, said network browsing software recognizing said forward control signal without a requirement of the pointer being located on the software forward button displayed on the monitor.

[whereby depression of said forward button causes communication of a forward control signal to network browsing software.]

Please insert and examine the following claims 24-28. Thank you.

24. A computer mouse according to claim 16 wherein the network navigation software navigates the Internet.

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25. A computer mouse according to claim 16 wherein the computer has a display, and the mouse further includes a cursor controller for communicating cursor command signals to the computer, the cursor command signals instructing the computer to move a cursor on the display, said first command signal causing the network navigation software to move to the previously visited network address regardless of a current location of the cursor on the display.

26. A computer mouse according to claim 16, wherein the user depressible surface is located on a side of said housing.

27. A computer mouse according to claim 17, wherein the user depressible surfaces are located on a side of said housing.

28. A computer mouse according to claim 17 wherein the network navigation software navigates the Internet.

Amendments to the Specification

So that the title is more description of the invention, please amend the title of the Invention throughout the application and file wherever appropriate to read:

--COMPUTER MOUSE WITH ENHANCED CONTROL BUTTON(S)--

On page 2, line 25, please delete the words "plurality of depressible". This change is to correct an inaccurate

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description of the prior art provided by Applicant, as the referenced prior art device uses a miniature joystick-like thumb-controllable member for pointer control, not a "plurality of depressible" buttons as originally and incorrectly described by Applicant.

On page 2, line 26, please replace the word "buttons" with --button--. Thank you.

On page 2, line 27, please replace the word "buttons" with --button--. Thank you.

B6 On page 2, line 32, following "equivalents" and before the period, please insert --for claims that include a rotatable ball in the claim--. With the amendment, it should read "equivalents for claims that include a rotatable ball in the claim."

On page 6, line 28, between "art" and "appreciate", please insert --will--.

On page 11, line 25 please replace "byte-stream" with the word --bit-stream--.

B7 On page 45, line 23, between "example" and "desktop", please insert --computer mice with any type of cursor control technology and--.

Page 49, line 33, please replace "specifics" with --specific structures and methods--.

REMARKS

Applicant has discovered a minor error in part numbering in the drawings. Photocopies having all of the proposed changes in red ink are enclosed. The changes are so minor that acceptance of the proposed changes by the Examiner is assumed, and therefore